Before the Federal Communications Commission Washington, D.C. 20554

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)	File Nos. 0003458819, 0003458876, 0003458877
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ORDER

Adopted: February 9, 2011 Released: February 9, 2011

By the Chief, Public Safety and Homeland Security Bureau:

I. INTRODUCTION

1. The County of Lancaster, Pennsylvania (Lancaster, or the County), has filed applications and a request for waiver to use certain non-public safety frequencies for public safety communications. Lancaster seeks waiver relief pursuant to Section 337(c) of the Communications Act of 1934 (the Act), as amended, to operate a land mobile public safety communications system on frequencies in the television (TV) Channel 15 band (476-482 MHz). In the alternative, Lancaster requests the same waiver relief pursuant to Section 1.925 of the Commission's rules. As further detailed below, we grant Lancaster's request for relief, as conditioned herein, under Section 337(c).

II. BACKGROUND

2. Lancaster's current public safety radio system "consists of a mix of low band VHF, high band VHF, UHF, and 800 MHz radio equipment." Lancaster seeks to upgrade its system by building a multi-site, trunked system and consolidating its operations in the UHF band. Lancaster notes that while

³ See Waiver Request at 3 and 10.

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¹ See File Nos. 0003458819 (filed May 30, 2008, amended September 4, 2008, November 17, 2008, February 17, 2009, February 24, 2009, May 6, 2009, May 22, 2009, May 29, 2009, September 3, 2009, and June 25, 2010), 0003458876 (filed June 2, 2008, amended July 8, 2008, September 4, 2008, November 17, 2008, February 17, 2009, February 24, 2009, May 6, 2009, May 22, 2009, May 29, 2009, September 3, 2009, September 22, 2009, and June 25, 2010), and 0003458877 (filed June 2, 2008, amended July 8, 2008, September 4, 2008, November 17, 2008, February 17, 2009, February 24, 2009, May 6, 2009, May 22, 2009, May 29, 2009, September 3, 2009, and June 25, 2010) and attached "Request for Waivers (Revised)" (Waiver Request).

² 47 U.S.C. § 337(c).

⁴ 47 C.F.R. § 1.925.

⁵ Waiver Request at 1.

the existing multi-band system makes "county-wide interoperability nearly impossible," consolidation in a single band will support interoperability among the various departments and agencies in the county. 6

- Lancaster proposes to operate its UHF public safety communications system in the TV Channel 15 band. The County states that, "[a]lthough eastern Lancaster County is within 80 km of Philadelphia, the majority of the county is more than 80 km from any city authorized by rule to utilize television ('T-Band') channels." Lancaster notes that TV Channels 19 and 20 are used heavily by the private land mobile radio service (PLMRS) in Philadelphia, making it "impossible to acquire a sufficient number of channels even if both channels are considered." Additionally the "[a]djacent counties of York and Dauphin are operating on channel 19 by waiver, further limiting channel availability." Lancaster notes that it individually considered channels 14 through 20, and that Lancaster could use TV Channel 15 and "affect no television stations." It also notes that, "because channel 15 is already allocated for land mobile use in the New York City area, the channel is ideally suited for use as a land mobile channel in Lancaster County."
- 4. The frequencies requested by Lancaster are not available for assignment to public safety entities under Part 90 of the Commission's rules. Specifically, TV Channel 15 is allocated for mobile operations and designated for PLMRS use in the New York, NY/NE NJ urbanized area, and PLMRS base stations can be authorized within 80 kilometers of the geographic center of New York City. Lancaster requests a waiver of Sections 2.106, 90.303 and 90.305(a) because the majority of the county is more than 80 kilometers from any city authorized by rule to utilize T-Band channels. Therefore, use of the TV Channel 15 band is not permitted for either PLMRS use or the subset of public safety use within Lancaster's proposed area of operation. Next, Lancaster requests a waiver of Sections 90.307 and 90.309 of the Commission's rules to allow its proposed base stations to be short-spaced to co-channel TV Station WFDC-DT, Channel 15, Washington, DC and adjacent channel TV station WTSD-CA, Channel 14, Wilmington, DE. Finally, the County requests a waiver of Section 90.313(c) so that it will not be

⁶ *Id*.

⁷ See id. at 3.

⁸ *Id*. at 2.

⁹ *Id*.

¹⁰ *Id. See* County of York, Pennsylvania, *Order*, 19 FCC Rcd 24425 (WTB PSCID 2004); County of Dauphin, Pennsylvania, *Order*, 22 FCC Rcd 8628 (PSHSB PD 2007).

¹¹ Waiver Request at 3.

¹² *Id.* at 3-4.

¹³ 47 C.F.R. Part 90.

¹⁴ See 47 C.F.R. §§ 2.106, 90.303, 90.305(a).

¹⁵ Waiver Request at 2.

¹⁶ 47 C.F.R. §§ 90.307, 90.309.

¹⁷ See Waiver Request at 5-6.

required to show that an assigned frequency pair is at full capacity before it may be assigned an additional frequency pair. 18

- 5. On August 14, 2009, the Public Safety and Homeland Security Bureau (Bureau) sought comment on Lancaster's waiver petition. ¹⁹ The Association for Maximum Service Television, Inc. (MSTV) filed opposing comments, ²⁰ and Lancaster filed reply comments. ²¹ On June 25, 2010, Lancaster filed supplemental information in response to questions from Bureau staff. ²²
- 6. Comments. MSTV states that "[b]ecause Lancaster's applications have significant implications for the viability of the local broadcast service, MSTV urges the Bureau to consider deferring action on this ad hoc request for a de facto reallocation of TV spectrum until the Commission determines that channel 15 is not needed to help resolve the complex reception issues confronting stations on the east coast." MSTV also states that there is an "inextricable link between Lancaster's application and a petition for rulemaking recently filed by the National Public Safety Telecommunications Council [NPSTC]," such that "no action should be taken until the FCC concludes consideration of that petition." The NPSTC petition "proposed rule changes, including a proposed additional reallocation, that would govern the use of television channels 14-20, under limited circumstances and in certain discrete areas, by public safety land mobile users." MSTV asserts that "[t]hose [NPSTC] proposals directly address the relief that Lancaster seeks in its applications." Lancaster responds by stating that "the NPSTC Petition is completely unrelated to the County's specific request for waiver, which stands on its own, whether or not the FCC takes action on the NPSTC matter."
- 7. While MSTV states that it "strongly believes that Lancaster's waiver and other similar requests are better addressed in the context of a rulemaking proceeding," it states that if the Bureau grants the waiver, "it should clarify that Lancaster will be required to protect existing television licensees." MSTV states that "Lancaster should be required to eliminate any interference caused by its facility to

¹⁸ File Nos. 0003458819, 0003458876, and 0003458877, attached "System Description, Request for Waiver, and Request for Extended Implementation and Shared Infrastructure" (System Description) at 9.

¹⁹ See Public Safety and Homeland Security Bureau Seeks Comment on a Request for Waiver Filed by County of Lancaster, Pennsylvania to Operate a County-Wide Trunked Public Safety Communications System Using Frequencies In the Television Channel 15 (476-482 MHz) Band, *Public Notice*, 24 FCC Rcd 10771 (PSHSB 2009) (*Public Notice*).

²⁰ See Letter from David L. Donovan, President, Association for Maximum Service Television, Inc., to Ms. Marlene H. Dortch, Secretary, Federal Communications Commission (filed Sept. 4, 2009) (MSTV Comments).

²¹ See Reply Comments of the County of Lancaster (dated Sept. 14, 2009) (Lancaster Reply Comments).

²² See File Nos. 0003458819, 0003458876, 0003458877, attached Response to Staff Questions, filed June 25, 2010 (Response to Staff Questions).

²³ MSTV Comments at 1.

²⁴ *Id. citing* National Public Safety Telecommunications Council, Petition for Rulemaking to Amend the Land Mobile-TV Sharing Rules in the 470-512 MHz Band, RM-11527 (Feb. 18, 2009) (NPSTC Petition).

²⁵ MSTV Comments at 2-3.

²⁶ *Id*. at 3.

²⁷ Lancaster Reply Comments at 2.

²⁸ MSTV Comments at 3.

television service, including immediately reducing, suspending, or terminating service to the extent necessary to avoid the interference."²⁹ Additionally, MSTV states that the Bureau "should clarify that future television authorizations that might interfere with Lancaster's facilities – including modifications of existing television authorizations – will be permitted, provided that the applicant provides written notice to Lancaster at least 30 days prior to activation of its requested facility."³⁰ MSTV asserts that "Lancaster recognized by agreeing to similar terms with respect to one station affected by its applications," that "these conditions are essential to protecting the integrity of local broadcast service."³¹

- 8. Lancaster responds that, while it "understands the need to protect existing stations," it considers it "unreasonable and unnecessary for the County to protect hypothetical stations of the future." Furthermore, Lancaster quotes the Conference Report for the legislation adopting Section 337(c), which says, "the public safety service use for which the unassigned frequency is requested must not interfere with uses of that spectrum by other co-primary users already licensed to use that frequency band." 33
- 9. MSTV asserts that "[s]ince the close of the digital television transition...a number of broadcast television viewers have experienced unanticipated reception issues, particularly including problems receiving signals of stations operating on high-VHF channels."³⁴ MSTV argues that this presents "public safety risks" as "[t]here is evidence, for example, that many viewers are unable to receive the signals of certain stations using indoor antennas, which are essential tools for obtaining critical news and weather information during severe weather conditions or other emergencies."³⁵ MSTV argues that, until reception issues are resolved, "the Media Bureau will need flexibility to authorize affected stations to switch channels or take other steps to ensure continued service to the public," and that PSHSB "should not grant waivers of the type requested by Lancaster until the Media Bureau determines that these reception issues have been adequately addressed."³⁶
- 10. Lancaster responds by noting that "MSTV does not refer to any evidence of such [interference] problems in or near Lancaster County. Nor does it explain how the County's waiver request for channel 15 is related to problems that may exist in other geographic areas or in other portions of the television spectrum." Lancaster further notes that, "existing co-channel television stations in Arlington, Virginia and Clearfield, Pennsylvania, along with requirements to protect co-channel land

³⁰ *Id*.

²⁹ Id.

³¹ *Id*.

³² Lancaster Reply Comments at 2.

³³ Lancaster Reply Comments at 2-3, *quoting* Conference Report to Accompany H.R. 215, Balanced Budget Act of 1997, 106th Cong., 1st Sess., Report 105-217 (Jul. 30, 1997) at 580.

³⁴ MSTV Comments at 2.

³⁵ Id

³⁶ *Id*.

³⁷ Lancaster Reply Comments at 1.

mobile operations in the New York metropolitan area, already block use of channel 15 for television service in or near Lancaster County." 38

III. DISCUSSION

- 11. Section 337. Section 337(c) of the Act provides that the Commission "shall waive . . . its regulations implementing this Act (other than its regulations regarding harmful interference) to the extent necessary to permit" entities "seeking to provide public safety services" to use unassigned spectrum not allocated to public safety if the Commission makes five specific findings: (i) no other spectrum allocated to public safety services is immediately available to satisfy the requested public safety service use; (ii) the requested use is technically feasible without causing harmful interference to other spectrum users entitled to protection from such interference under the Commission's regulations; (iii) the use of the unassigned frequency for the provision of public safety services is consistent with other allocations for the provision of such services in the geographic area for which the application is made; (iv) the unassigned frequency was allocated for its present use not less than two years prior to the date on which the application is granted; and (v) granting such application is consistent with the public interest.³⁹
- 12. As an initial matter, we note that Section 337(c)(1) requires that the requested non-public safety spectrum be unassigned.⁴⁰ Until recently, WGAL Hearst-Argyle Television, Inc. (WGAL) had a construction permit for a DTV replacement translator on TV Channel 15 in Lancaster, Pennsylvania.⁴¹ However, on April 7, 2010, WGAL obtained an alternate construction permit for its DTV translator on TV Channel 51⁴² and on February 2, 2011, WGAL canceled the Channel 15 permit.⁴³ Therefore, we find that the spectrum is unassigned for the purposes of Section 337.
- 13. When considering waiver requests filed pursuant to Section 337(c) of the Act, we must first determine whether the applicant is an "entity seeking to provide public safety services." The Act defines public safety services as "services (A) the sole or principal purpose of which is to protect the safety of life, health, or property; (B) that are provided (i) by State or local government entities; or (ii) by non-governmental organizations that are authorized by a governmental entity whose primary mission is the provision of such services; and (C) that are not made commercially available to the public by the provider." Lancaster states that "the requested licenses will allow the County to build a modern communications system in further support of the safety of life and property." Based on the information before us, Lancaster is an entity that provides public safety services as defined by the statute. Next, we

⁴⁶ Waiver Request at 11.

³⁸ *Id.* at 1-2. *See also* File Nos. 0003458819, 0003458876, and 0003458877, attached Letter from Ralph A. Haller, President, Fox Ridge Communications, to Robert Gurss, Esq. (dated Aug. 25, 2009) (containing a "Contour study showing Channel 15 is not available for broadcasting in Lancaster County") (Fox Ridge Letter).

³⁹ 47 U.S.C. § 337(c).

⁴⁰ See 47 U.S.C. § 337(c)(1).

⁴¹ See File No. BDRTCDT-20090824ADT.

⁴² See File No. BDRTCDT-20100329ACY. The Media Bureau granted this application on April 7, 2010, and the grant is final pursuant to 47 C.F.R. § 1.108.

⁴³ See File No. BDRTCDT-20090824ADT.

⁴⁴ See 47 U.S.C. § 337(f).

⁴⁵ *Id*.

consider whether Lancaster's petition satisfies the specific showing requirements mandated by Section 337(c) of the Act.

- 14. No other spectrum allocated to public safety services is immediately available to satisfy the requested public safety service use. Lancaster states that the new system will require 100 channel pairs to support the County's aggregate communications needs, and that TV Channel 15 in the UHF band spectrum is the only band available that can provide the needed channel capacity. Lancaster seeks 100 channels in order to provide service to over 5400 users from "all of the County's police departments, fire departments, EMS organizations, prison departments, parks departments, probation and parole departments, and sheriff's department. We observe that 5400 users on 100 channels would result in an average of 54 users per frequency pair. This is consistent with the Commission's frequency loading criterion in the 470-512 MHz band for public safety, which provides that a frequency pair is considered fully loaded at 50 mobile/portable units. Therefore, we consider Lancaster's statement of capacity requirements to be reasonable.
- 15. We next consider whether Lancaster could satisfy its channel requirements in any existing public safety frequency band. Lancaster states that "[t]he VHF band is fully occupied in the relevant area," which is confirmed by our independent review of our licensing data. With respect to the 450-470 MHz portion of the UHF band, Lancaster has provided a UHF frequency search by Fox Ridge Communications that indicates only two "marginally acceptable" available channels. In the 800 MHz band, Lancaster states that there are 48 channels available to the County. Although Lancaster initially contemplated deploying a new system in the 800 MHz band, the number of available channels in the band is no longer sufficient to meet the County's requirements.
- 16. Finally, we examine the 700 MHz band. Section 337 compels us to consider the 700 MHz band public safety channels to be immediately available and ready for assignment. Lancaster notes, however, that the 700 MHz Regional Plan for Region 28, in which the County is located, allots only 26 channels (13 channel pairs) for use in the County. Lancaster asserts that even when combined with the 48 available channels in the 800 MHz band, the allotted 700 MHz band channels will be

⁴⁹ Response to Staff Questions at 2.

⁴⁷ 47 U.S.C. § 337(c)(1)(A).

 $^{^{48}}$ Id

⁵⁰ See 47 C.F.R. § 90.313(a)(1). The Bureau has used the Commission's loading requirements to evaluate a waiver applicant's spectrum requirements under Section 337. See County of Los Angeles, California, Order, 23 FCC Rcd 18389, 18399 n. 91 (PSHSB 2008) (*LA County Order*).

⁵¹ Waiver Request at 10.

⁵² File Nos. 0003458819, 0003458876, 0003458877, attached UHF Channel Study, submitted by Ralph A. Haller, President, Fox Ridge Communications, Inc., dated March 30, 2008, at 2.

⁵³ See Lancaster Comments at 2.

⁵⁴ Waiver Request at 10.

⁵⁵ See, e.g., LA County Order, 23 FCC Rcd at 18398 ¶ 19.

⁵⁶ Lancaster Comments at 1-2. On September 22, 2009, the Bureau approved the Region 28 700 MHz Plan. *See* Public Safety and Homeland Security Bureau Approves Region 28 (Delaware, Southern New Jersey and Eastern Pennsylvania) 700 MHz Regional Plan, WT Docket No. 02-378, *Public Notice*, 24 FCC Rcd 12001 (PSHSB 2009).

insufficient to meet the County's requirements."⁵⁷ We agree that the 800 MHz band and the 700 MHz regional channels do not offer sufficient capacity for all of Lancaster's proposed operations. Bureau staff also asked whether Lancaster could obtain access to state-licensed 700 MHz channels.⁵⁸ Lancaster states that it contacted the Commonwealth of Pennsylvania regarding access to the statewide channel allotment in the 700 MHz band, and was informed that the Commonwealth "intends to use those channels and has no current plans to release them for local government use."⁵⁹ Based on the foregoing, we conclude that there is not enough public safety spectrum available to satisfy the requested public safety service use, and that Lancaster has made a sufficient showing to satisfy this criterion.

- 17. The requested use is technically feasible without causing harmful interference to other spectrum users entitled to protection from such interference under the Commission's regulations. With respect to protecting other spectrum users from harmful interference, Lancaster contends that "no television station will be affected by the use of channel 15 by Lancaster County for land mobile operations." Lancaster has provided an engineering study showing that "in no case does an interference contour overlap a service contour of any station, thus fully protecting all incumbent television stations." Additionally, the study asserts that "potentially affected LPTV/translator stations will receive more than the required protection."
- 18. The Commission's rules specify minimum distance separation criteria between PLMRS stations and TV stations to protect over-the-air broadcast operations on TV Channels 14-21 outside of the designated urbanized areas from harmful interference caused by PLMRS systems operating in the 470-512 MHz band. Section 90.309 requires PLMRS base stations to be spaced at least 193 kilometers from co-channel TV stations, and at least 96 kilometers from adjacent channel TV stations. In addition, Section 90.307(d) requires a PLMRS base station which has associated mobile units to be spaced at least

⁵⁷ Lancaster Comments at 2.

 $^{^{58}}$ See Response to Staff Questions at 1. See also license for Station WPTZ795. See also LA County Order at 18399 \P 20 (taking into account the California 700 MHz State License in the 700 MHz capacity analysis for County of Los Angeles).

⁵⁹ Response to Staff Questions at 1.

⁶⁰ Waiver Request at 7.

⁶¹ Waiver Request at 5. With regard to co-channel analog stations, Lancaster states, "NTSC station WLYH-TV [Lancaster, Pennsylvania] will be transitioning from channel 15 to channel 23 for DTV service and is not considered in this study." *Id.* at 5, note 12. With regard to adjacent channel analog stations, Lancaster states, "NTSC station WBOC-TV in Salisbury, MD, will be moving from channel 16 to channel 21 for DTV operations. Similarly, NTSC station WFDC-TV in Arlington, VA, will be moving from channel 14 to channel 15. NTSC station WNEP-TV in Scranton, PA, will be transitioning from channel 16 to channel 49. None of these NTSC stations are considered in this study." *Id.* at 6, note 13. See *also id.*, Attachments One-Five.

⁶² Waiver Request at 6.

⁶³ See Amendment of Parts 2, 89, 91, and 93; geographic reallocation of UHF-TV Channels 14 through 20 to the land mobile radio services for use within the 25 largest urbanized areas of the United States; Petition Filed by the Telecommunications Committee of the National Association of Manufacturers To Permit Use of TV Channels 14 and 15 by Land Mobile Stations in the Los Angeles Area, Docket No. 18261, *First Report and Order*, 23 FCC 2d 325, 342-343 ¶ 42, 46 (1970).

⁶⁴ See 47 C.F.R. § 90.309 Table A.

 $^{^{65}}$ See 47 C.F.R. \S 90.309 Table E.

145 kilometers from a protected adjacent channel TV station.⁶⁶ As noted above, Lancaster's proposed operations would be short-spaced to two active television stations: (1) Lancaster's southernmost base station would be located 122.7 kilometers from co-channel Station WFDC-DT (TV Channel 15, Arlington, Virginia), and (2) Lancaster's easternmost base station would be located 67 kilometers from adjacent channel Class A Station WTSD-CA (TV Channel 14, Wilmington, Delaware). Additionally, Lancaster's southernmost base station would be located 45.9 kilometers from the site specified on WTSD-CA's pending application.⁶⁷

19. Lancaster has provided evidence of concurrence from co-channel station WFDC-TV.⁶⁸ On May 6, 2009, the County amended its applications by attaching a copy of a conditional concurrence letter from Telefutura D.C. LLC (Telefutura), the station licensee.⁶⁹ Based on Lancaster's acceptance and adherence to the conditions in the Telefutura Letter,⁷⁰ we conclude that Lancaster's proposed operation would not cause harmful interference to Station WFDC-DT.⁷¹

⁶⁶ 47 C.F.R. § 90.307(d). The Commission has stated that mobile and control stations, associated with base stations located less than the required separation from an adjacent channel TV station, may not operate within 60 miles (approximately 100 kilometers) of that TV station. *See* Private Land Mobile Operations in the 470-512 MHz Band, *Public Notice* No. 20291 (rel. Oct. 22, 1991) (1991 Public Notice) at 1.

⁶⁷ See File No. BSTA-20070531AEA.

⁶⁸ See File Nos. 0003458819, 0003458876, 0003458877, attached Letter from Michael W. Weaver, Director, Lancaster County-Wide Communications, to Christopher G. Wood, Esq., Vice President and Senior Legal Counsel, Telefutura D.C. LLC (dated Feb. 19, 2009); Letter from Michael W. Weaver, Director, Lancaster County-Wide Communications, to Rev. Steve Hare, President, Priority Communications Ministries, Inc. (WTSD-CA) (dated Jan. 30, 2009).

⁶⁹ See File Nos. 0003458819, 0003458876, 0003458877, attached Letter of Christopher G. Wood, Vice President and Senior Legal Counsel, Univision Communications, Inc. on behalf of Telefutura D.C. LLC, to Michael W. Weaver, Director, Lancaster County-Wide Communications, on April 27, 2009 (agreed and accepted by Michael W. Weaver on April 29, 2009) (Telefutura Letter).

⁷⁰ See id. at 1-2. The conditions are as follows: "(1) Lancaster County will provide Telefutura no less than 30 days' prior written notice of the date on which it intends to commence service on the Facilities. (2) Lancaster accepts and agrees that all usage of the Facilities shall be within the geographic boundaries of Lancaster County. (3) Lancaster County acknowledges that its Facilities are located closer to WFDC than would normally be permitted by the FCC Rules and as such its Facilities are secondary to WFDC and subject to interference from WFDC through no fault of Telefutura. (4) Lancaster County agrees to eliminate any interference caused by the Facilities to WFDC viewers located within the Station's protected service contour, as it currently is or hereafter may be determined pursuant to the Station's authorized facilities and the rules and regulations of the FCC ("Protected Service Contour"). Accordingly, Lancaster County shall make an immediate reduction, suspension or termination of service by the Facilities to the extent necessary to eliminate interference within the WFDC Protected Service Contour. (5) Telefutura may modify the technical facilities of WFDC in any way it deems necessary, including, but not limited to, changes in effective radiated power; antenna height; antenna polarization including elliptical or circular polarization; transmitter location; and including, without limitation, constructing and deploying a distributed transmission system, at any time and without regard to predicted or actual interference to the Facilities, subject only to written notice by Telefutura to Lancaster County at least 30 days prior to activation of any such facilities or system. (6) Lancaster County will submit a copy of this executed letter agreement as an amendment or supplement to each of the three application files referenced above."

⁷¹ Lancaster also obtained conditional concurrence from Pennsylvania State University, licensee of TV Station WPSU-DT, TV Channel 15, Clearfield, Pennsylvania, although there is no spacing violation. Based on Lancaster's acceptance and adherence to the conditions in the University Letter, which are nearly identical to the conditions in the Telefutura Letter, we conclude that Lancaster's proposed operation would not cause harmful interference to (continued....)

- Lancaster has also sought concurrence from adjacent channel Class A TV Station WTSD-CA, but states that counsel for WTSD-CA has refused to review the County's request for concurrence unless the County establishes a \$7500 escrow account to cover the station's costs of reviewing the request.⁷² Lancaster states that it is unwilling and unable to provide the requested escrow account and should not be required to do so as a condition of obtaining the licensee's consent.⁷³ Lancaster contends that in the absence of such concurrence, its engineering analysis demonstrates that WTSD-CA will be fully protected from harmful interference.⁷⁴ We have independently reviewed the County's engineering analysis and agree with its conclusions. The generally accepted protection criterion for a contour analysis between a PLMRS station and an adjacent channel TV station is zero dB at the TV station's Grade B contour. 75 Although the Commission's rules do not use the term "Grade B" to describe contours for Class A stations, Section 73.6010(a)(3) of the Commission's rules provides a protected contour value of 74 dBu for Class A stations on TV Channels 14-69. Based on the non-overlap of Lancaster's 74 dBu interfering contours with Station WTSD-CA's existing and proposed 74 dBu service contours, 77 we agree that Lancaster would provide the requisite 0 dB protection to Station WTSD-CA. Because Class A stations have primary status. 78 we require Lancaster to eliminate any interference caused by its facilities to viewers located within the existing and proposed protected contours of Station WTSD-CA, and Lancaster must provide to Station WTSD-CA written notice of the date on which Lancaster intends to commence service. This condition also protects Station WTSD-CA's future DTV operations on TV Channel 14, as this Order is not intended to impede Station WTSD-CA's ability to transition to digital operation.
- 21. Lancaster also demonstrated that its operations would affect no low power television (LPTV) stations or translators. The protected contours are 74 dBuV/m for analog⁸⁰ and 51 dBuV/m for digital⁸¹ LPTV stations and translators. For co-channel stations, Section 90.309 Table A requires a 50 dB protection ratio to the service contour of an analog station. Although Lancaster demonstrated only 45 dB protection based on the protection ratio given in Section 74.707(d)(1), there are no cases of contour

⁷² Letter of Robert M. Gurss, Counsel for Lancaster County, to Zenji Nakazawa, Deputy Division Chief, Public Safety and Homeland Security Bureau, FCC, on May 27, 2009.

⁷³ *Id*. at 1.

⁷⁴*Id*. at 1.

⁷⁵ See 1991 Public Notice at 1.

⁷⁶ See 47 C.F.R. § 73.6010(a)(3).

⁷⁷ See File Nos. 0003458819, 0003458876, 0003458877, attached "Further Request for Waivers" (filed May 22, 2009) at Attachment Four.

⁷⁸ See 47 C.F.R. § 73.6001(a).(c).

⁷⁹ See Waiver Request at 5-6.

⁸⁰ See 47 C.F.R. § 74.707(a)(1)(iii).

⁸¹ See 47 C.F.R. § 74.792(a)(3).

⁸² See 47 C.F.R. § 90.309 Table A.

⁸³ See Waiver Request at 5; 47 C.F.R. § 74.707(d)(1).

overlap. ⁸⁴ Thus, we are persuaded that Lancaster would provide 50 dB protection to co-channel analog LPTV stations and translators. For co-channel digital stations, Lancaster used a protection ratio of 17 dB based on Section 90.545(a)(1). ⁸⁵ Lancaster demonstrates that potentially affected co-channel digital LPTV/translator stations will receive more than 17 dB protection. ⁸⁶ As we stated above, the generally accepted protection criterion for a contour analysis between a PLMRS station and an adjacent channel TV station is zero dB at the TV station's Grade B contour. ⁸⁷ For adjacent channel digital stations, Lancaster used a protection ratio of -23 dB based on Section 90.545(a)(2). ⁸⁸ Lancaster demonstrates that potentially affected adjacent channel analog and digital LPTV/translator stations will receive more than the required protections. ⁸⁹ Accordingly, we find that the requested use is technically feasible without causing harmful interference to other spectrum users entitled to protection from such interference under the Commission's regulations.

- 22. The use of the unassigned frequency for the provision of public safety services is consistent with other allocations for the provision of such services in the geographic area for which the application is made. Lancaster notes that "television band channels (470-512 MHz) and other UHF channels are used for land mobile operations in neighboring areas, including Dauphin and York counties and the Philadelphia area." Given that the Philadelphia 80-kilometer PLMRS area encompasses the eastern portion of Lancaster County, and that Dauphin and York Counties border Lancaster County to the north-west and the west, respectively, we find that this criterion is satisfied.
- 23. The unassigned frequency was allocated for its present use not less than two years prior to the date on which the application is granted. Section 337 requires that the frequency's allocation for its present use have remained unchanged for at least two years prior to grant of the application. In this case, the allocation of this spectrum (broadcasting, per Section 2.106 of the rules) has not changed for over fifty years. We also note that rules providing for DTV broadcasting were adopted for the TV broadcast band in 1997. Accordingly, we find that Lancaster satisfies this criterion of Section 337.

⁸⁴ See Waiver Request, Attachment Three.

⁸⁵ 47 C.F.R. § 90.545(a)(1). See Waiver Request at 6.

⁸⁶ See Waiver Request, Attachment Three.

⁸⁷ See 1991 Public Notice at 1.

⁸⁸ See 47 C.F.R. § 90.545(a)(2). See Waiver Request at 6.

⁸⁹ See Waiver Request, Attachments Four and Five.

⁹⁰ Waiver Request at 10-11.

⁹¹ See id. at 2.

⁹² See Advanced Television Systems and Their Impact upon the Existing Television Service, Sixth Report and Order, MM Docket No. 87-268, 12 FCC Rcd 14588 (1997).

⁹³ We note that the Media Bureau recently denied a Section 337(c)(1) waiver request that involved a different set of circumstances than the ones at issue here. *See* Letter from Barbara A. Kreisman, Chief, Video Division, Media Bureau, to the Alabama Educational Television Commission, 25 FCC Rcd 3223 (2010) (*AETC Letter*). In the *AETC Letter*, the Media Bureau denied the request because the petitioner did not show that it was going to provide 'public safety services' within the meaning of Section 337(c)(1), and because it did not show that the frequencies that it requested were unassigned or available for assignment. Unlike the petitioner in the *AETC Letter*, we find here that Lancaster County has shown that it will provide public safety services, and that its proposed frequencies will be unassigned upon WGAL's surrender of its construction permit for the Channel 15 frequencies. To the extent that (continued....)

- Granting such application is consistent with the public interest. We find that the proposed system would further the public interest by affording Lancaster's responders and citizens with the necessary spectrum to enable the County to protect the lives and property in its care. In addition, we find that grant of Lancaster's waiver request will promote interoperability among multiple agencies and municipalities with the County, as well as wide-area interoperability with neighboring jurisdictions.⁹⁴ Lancaster notes that most of the other public safety agencies with which it interoperates currently operate on UHF frequencies. 95 Although the neighboring jurisdictions operate on different TV channels in the 470-512 MHz band, interoperability is possible because most UHF PLMRS equipment have operational frequency ranges that include the 450-470 MHz and 470-512 MHz bands. Lancaster states that "[i]f Lancaster County is awarded the UHF T-Band channels, this will allow for easy interoperability by allowing the interoperability channels to be programmed into the mobiles and portables." Lancaster also states that it "desires to share the system with other Public Safety organizations once it becomes operational."97 In this connection, the County will be authorized "to share its system with any other public safety entity on a non-profit basis" under the provisions of Section 90.179 of the Commission's rules. 98 We note that shared operation shall be within the geographic boundaries of Lancaster County consistent with Lancaster's agreements in the Telefutura and University Letters and shall be subject to the other conditions in this Order. Finally, we find it significant that Lancaster intends to surrender its 800 MHz frequencies if the waiver is granted, and that it is also willing to consider relinquishing its low and high band VHF frequencies after it has successfully transitioned to the new system. 99 Accordingly, we impose a condition that Lancaster shall cancel its 800 MHz licenses within 45 days after Lancaster files its first construction notification for the TV Channel 15 PLMRS system. 100
- 25. We also find that the public interest weighs against deferring action on Lancaster's request, as proposed by MSTV, to allow consideration of whether Channel 15 is needed to help resolve DTV reception issues. Lancaster has presented evidence that a full-power DTV station could not use TV Channel 15 in or near Lancaster due to the proximity of co-channel DTV stations WPSU-DT and WFDC-

⁹⁴ System Description at 3. Lancaster cites as examples the following UHF users with whom Lancaster would be interoperable: Lancaster County Emergency Medical Services, the neighboring counties of Dauphin and York, and the City of Philadelphia and surrounding cities. *See id*.

⁹⁵ Lancaster Comments at 2.

⁹⁶ See Response to Staff Questions at 2. Moreover, 47 C.F.R. § 90.421 provides for the operation of mobile station units not under the control of the licensee.

⁹⁷ System Description at 12.

⁹⁸ *Id.* at 10. *See* 47 C.F.R. § 90.179.

⁹⁹ See Response to Staff Questions at 2.

¹⁰⁰ The call signs are: WNRU581, WPZC615, WPZI240, WPZL299, WPZR685, WQAC254, WQBH524, WQCC491, WQCC879, and WQEC735. *See* System Description at 2 footnote 1. Lancaster stated that it "is willing to surrender its 800 MHz frequencies if the waiver is granted and it receives a license for the requested UHF frequencies." *See* Response to Staff Questions at 2. Lancaster states that it "is willing to consider relinquishing its low and high band VHF frequencies after it has successfully transitioned to the new system." *Id.* We do not impose a condition for Lancaster to relinquish its low and high band VHF frequencies because, unlike Lancaster's 800 MHz frequencies, the VHF frequencies are still in use and may continue to be in use during a transition period to the new system.

DT as well as the New York land mobile allocation. Our analysis of existing television licensing landscape concurs with Lancaster's analysis. We find that it would be extremely difficult for a full power broadcaster to make use of TV Channel 15 in or near Lancaster County without interfering with these incumbents. Although we must weigh carefully the impact of the loss of spectrum for broadcast use, the circumstances here present a unique situation in which the potential broadcast use in Lancaster's area is constrained by the presence of nearby incumbents, and Lancaster has made a compelling case for the urgency of its need to access the spectrum in order to provide for the public safety of its citizens. On balance, we find that the public interest in this instance favors Lancaster's proposed public safety use.

- 26. We also reject MSTV's contention that we should postpone our consideration of Lancaster's request pending Commission action on the NPSTC Petition. Without prejudging the issues raised in the Petition, we are not persuaded that resolution of the petition would provide a viable or timely alternative to Lancaster's proposed use for TV Channel 15 in this instance. We therefore agree with Lancaster that its waiver request stands alone on its own merits, and we therefore treat it separate from the NPSTC Petition. Similarly, MSTV provides no basis to support its contention that Lancaster's request would be better handled as part of a separate rulemaking proceeding. In reaching this determination, we also find that a grant of Lancaster's request as conditioned herein provides more than adequate safeguards to avoid or minimize the interference concerns raised by MSTV in the alternative.
- We now address MSTV's request for clarification that future television authorizations 27. that might interfere with Lancaster's facilities – including modifications of existing television authorizations – will be permitted, provided that the applicant provides written notice to Lancaster at least 30 days prior to activation of its requested facility. Although the County requests that its licenses be granted with primary status, 103 we must reach a balance in public interest considerations. We do not find it in the public interest to prevent existing TV stations from modifying their facilities out of consideration for Lancaster's operations, because to do so would restrict or limit the ability for existing TV licensees to make coverage changes to better serve their viewing audiences. The licensees of WFDC and WPSU have agreed to provide Lancaster 30 days advance notice of activating facilities associated with such modifications. 104 In this order, we do not have the authority to mandate that other broadcast licensees provide the same advanced notification if they are aware that their future modifications would affect Lancaster, but we encourage them to do so. On the other hand, due to the critical nature of public safety communications, we find it in the public interest to afford Lancaster's operations primary status with respect to future TV stations. Our decision affords Lancaster a degree of certainty in making the investment in the new system because Lancaster's mission-critical communications will be protected from new TV stations. As a practical matter, Lancaster would be protected from future full power DTV stations on TV Channels 14, 15, and 16 because full power DTV applicants seeking to use these channels may not locate transmitters within 250 km of the New York City center coordinates, ¹⁰⁵ and the proximity

¹⁰¹ See Fox Ridge Letter.

¹⁰² See 47 C.F.R. § 73.623(d)(2). The minimum distance between co-channel DTV stations in Zone 1 is 196.3 kilometers. A hypothetical DTV applicant seeking to use the transmitter site of former Channel 15 station WLYH-TV would be located 156.131 kilometers from Station WPSU-DT and 192.524 kilometers from Station WFDC-DT, and thus would be short-spaced. Further, full power DTV applicants seeking to use TV Channels 14, 15, and 16 may not locate transmitters within 250 km of the New York City center coordinates. See 47 C.F.R. § 73.623(e). Lancaster County is within this area.

¹⁰³ See Waiver Request at 11.

 $^{^{104}\,} See$ Telefutura Letter at 2; University Letter at 1-2.

¹⁰⁵ See 47 C.F.R. § 73.623(e).

of co-channel DTV stations WPSU-DT and WFDC-DT likely will block future full power stations that could interfere with Lancaster. Moreover, no new or relocated full-power TV Channel 15 DTV transmitter may be located within 170 kilometers of Lancaster's fixed base station coordinates as indicated on the captioned applications. No new or relocated full-power TV Channel 14 or 16 DTV transmitter may be located within 96 kilometers of Lancaster's fixed base station coordinates. We afford Lancaster primary status from future digital LPTV and translator stations on TV Channels 14, 15, and 16 by designating the geographic border of Lancaster County as a new land mobile protected contour on TV Channel 15. 108

28. We also note that Section 90.307(e) of the Commission's rules requires 470-512 MHz PLMR applicants to protect the contours of TV stations identified in the Commission's publication, "TV Stations to be considered in the preparation of applications for Land Mobile Facilities in the Band 470-512 MHz." This publication contains listings for analog stations that have vacated their channels in the DTV transition, including WLYH-TV, the analog station that formerly operated on TV Channel 15 in Lancaster. Thus, notwithstanding the fact that WLYH-TV has vacated Channel 15, Section 90.307(a) remains in effect and Lancaster requires a waiver of this provision to operate its proposed facilities. We grant this waiver on our own motion for the public interest reasons stated in paragraphs 24-27 above.

¹⁰⁶ We arrive at a distance of 170 kilometers as follows. 47 C.F.R. § 90.305(a) allows PLMR base stations in the T-band to be located up to 80 kilometers from the applicable city center coordinates. 47 C.F.R. § 73.623(e) prohibits new or relocated full power DTV station transmitters within 250 kilometers of the city center coordinates of a co-channel PLMR operation. A PLMR base station at the edge of the 80-kilometer circle would have a buffer of 170 kilometers from new co-channel DTV stations, and we afford Lancaster the same buffer.

¹⁰⁷ 47 C.F.R. § 73.623(e) prohibits new or relocated DTV station transmitters within 176 km of the city center coordinates of an adjacent channel PLMR operation. A PLMR base station at the edge of the 80-kilometer circle would have a buffer of 96 kilometers from new adjacent channel DTV stations, and we afford Lancaster the same buffer.

¹⁰⁸ By applying the technical specifications of 47 C.F.R. § 74.709(d)(2) and (3) at the border of Lancaster County, Lancaster's operations are protected as follows: (a) a low power TV or TV translator station application will not be accepted if it specifies Channel 15 and its field strength at the Lancaster County border exceeds 52 dBu; and (b) a low power TV or TV translator station application will not be accepted if it specifies TV Channels 14 or 16 and its field strength at the Lancaster County border exceeds 72 dBu. We note that Mako Communications, LLC filed (1) a displacement application for digital LPTV Station W36DO-D on TV Channel 15 in Darby, Pennsylvania on December 6, 2010; and (2) an application for special temporary authority for a digital TV translator station on the same channel and at the same location on January 31, 2011. *See* File Nos. BDISDTL-20101203ABC and BSTA-20110128ABM, respectively. Since they were filed before the adoption of this Order, we defer to Media Bureau on the outcome of those applications. In the event that Media Bureau grants the former application, then Lancaster must accept interference from and resolve interference to Station W36DO-D's digital LPTV operations on TV Channel 15.

¹⁰⁹ 47 C.F.R. § 90.307(e). *See* "TV stations to be considered in the preparation of Applications for Land Mobile Facilities in the Band 470-512 MHz" (1974). An amended version of this publication is attached to the *1991 Public Notice*.

¹¹⁰ *Id*.

Station WLYH-TV terminated analog service on TV Channel 15 on February 17, 2009. *See* Preparation in High Gear for Stations Going All-Digital This Week, *News*, Attachment at 16 (rel. Feb. 16, 2009).

¹¹² After plotting the interfering contours of co-channel Stations WPSU-DT and WFDC-DT, staff observed that each DTV station overlaps more than 50% of the area enclosed by the WLYH-TV Grade B contour. Contours were (continued....)

We conclude that granting the waiver relief requested by Lancaster, as conditioned herein, is consistent with the public interest. In reaching this decision, we also observe that the FCC has begun examining ways that the TV bands could be repurposed for flexible use, including commercial mobile broadband. For instance, the National Broadband Plan has recommended that the Commission consider freeing up spectrum for commercial broadband use by using such mechanisms as voluntary incentive auctions, 113 and the Commission has taken its first steps toward this possibility with allocation proposals that would accommodate such use. 114 While, at this time, we conclude that grant of Lancaster's application will not compromise the Commission's ability to act (and flexibility in acting) on the recommendations of the National Broadband Plan and related initiatives to repurpose part of the TV bands for flexible use, we note that our consideration of the public interest requires that we carefully consider any action that would disrupt or hamper the Commission's ability to identify and maximize the use of available spectrum. As the Commission takes steps to further broadband spectrum initiatives, it is likely that additional waiver requests for public safety use of spectrum currently allocated for TV broadcast service will have different and more significant effects on Commission plans for this spectrum, and that it will accordingly become much more difficult to conclude that such waivers would, on the whole, serve the public interest. We therefore strongly urge public safety entities contemplating future waivers for TV and other non-public safety spectrum to consider use of the 700 MHz band to promote such goals as nationwide interoperability, consistent with the public interest.

IV. CONCLUSION

- 30. Based on the record before us, we find that Lancaster meets the statutory criteria of Section 337(c) of the Act. Accordingly, we grant Lancaster's waiver request with the following conditions:
 - (1) Lancaster County will provide Telefutura, Pennsylvania State University (the University), and WTSD-CA no less than 30 days' prior written notice of the date on which it intends to commence service on the Facilities.
 - (2) Lancaster accepts and agrees that all usage of the Facilities shall be within the geographic boundaries of Lancaster County.
 - (3) Lancaster County's Facilities are located closer to WFDC and WTSD-CA than would normally be permitted by the FCC Rules and as such its Facilities are secondary to WFDC, WTSD-CA, and WTSD-CA's future DTV operations and subject to interference from WFDC and WTSD-CA through no fault of the respective TV licensees.

 $^{^{113}}$ See Fed. Communications Comm'n, Connecting America: The National Broadband Plan at 88-93 (2010).

¹¹⁴ See Innovation in the Broadcast Television Bands: Allocations, Channel Sharing and Improvements to VHF, Notice of Proposed Rulemaking in ET Docket No. 10-235, at 1 (released Nov. 30, 2010) (proposing, inter alia, to expand allocations for primary operations in TV bands to include fixed and mobile services, as one of the "preliminary steps to enable the repurposing of a portion of the UHF and VHF frequency bands that are currently used by the broadcast television service, which in later actions we expect to make available for flexible use by fixed and mobile wireless communications services, including mobile broadband").

- (4) Lancaster County shall eliminate any interference caused by the Facilities to WFDC, WPSU, and WTSD-CA's viewers located within their protected service contours, as they currently are or hereafter may be determined pursuant to the Stations' authorized facilities and the rules and regulations of the FCC ("Protected Service Contour"). Accordingly, Lancaster County shall make an immediate reduction, suspension or termination of service by the Facilities to the extent necessary to eliminate interference within the WFDC, WPSU, and WTSD-CA Protected Service Contours.
- (5) As indicated in Telefutura and the University's concurrence letters, Telefutura and the University may modify the technical facilities of WFDC or WPSU, respectively, in any way they deem necessary, including, but not limited to, changes in effective radiated power; antenna height; antenna polarization including elliptical or circular polarization; transmitter location; and including, without limitation, constructing and deploying a distributed transmission system, at any time and without regard to predicted or actual interference to the Facilities, subject only to written notice by Telefutura or the University to Lancaster County at least 30 days prior to activation of any such facilities or system.¹¹⁵
- (6) Notwithstanding the above conditions, Lancaster County must eliminate any interference caused by the its Facilities to viewers located within the protected service contour of any existing full power or Class A TV or DTV station, including the facilities of File No. BDISDTL-20101203ABC (W36DO-D) in the event that Media Bureau grants the application, consistent with the Commission's rules. Lancaster County shall make an immediate reduction, suspension or termination of service by the Facilities to the extent necessary to eliminate such interference.
- (7) Lancaster's operations otherwise shall be primary with respect to future TV stations as follows: (a) full power DTV applicants seeking to use TV Channel 15 may not locate transmitters within 170 kilometers of Lancaster's fixed base station coordinates as indicated on the captioned applications or within 250 km of the New York City center coordinates in accordance with 47 C.F.R. § 73.623(e); (b) full power DTV applicants seeking to use TV Channels 14 or 16 may not locate transmitters within 96 kilometers of Lancaster's fixed base station coordinates as indicated on the captioned applications or within 250 km of the New York City center coordinates in accordance with 47 C.F.R. § 73.623(e); (c) a low power TV or TV translator station application will not be accepted if it specifies Channel 15 and its field strength at the Lancaster County border exceeds 52 dBu; and (d) a low power TV or TV translator station application will not be accepted if it specifies TV Channels 14 or 16 and its field strength at the Lancaster County border exceeds 72 dBu.
- (8) Lancaster shall cancel its 800 MHz licenses (call signs WNRU581, WPZC615, WPZI240, WPZL299, WPZR685, WQAC254, WQBH524, WQCC491, WQCC879, and WQEC735) within 45 days after Lancaster files its first construction notification in any of the call signs based on File Nos. 0003458819, 0003458876, and 0003458877.

V. ORDERING CLAUSES

31. Accordingly, IT IS ORDERED that, pursuant to Sections 4(i) and 337(c) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), and 337(c), the request for waiver associated with the captioned application filed by the County of Lancaster, Pennsylvania, on June 2,

¹¹⁵ Telefutura Letter at 1-2; University Letter at 1-2.

2008, as amended, IS CONDITIONALLY GRANTED, and File Nos. 0003458819, 0003458876, and 0003458877 SHALL BE PROCESSED consistent with this *Order* and the Commission's rules.

32. This action is taken under delegated authority pursuant to Sections 0.191 and 0.392 of the Commission's rules, 47 C.F.R. §§ 0.191, 0.392.

FEDERAL COMMUNICATIONS COMMISSION

James Arden Barnett, Jr., Rear Admiral, (Ret.) Chief Public Safety and Homeland Security Bureau